

REMARKS

In response to the Final Office Action mailed March 21, 2003, applicants respectfully request reconsideration in view of the Request for Continued Prosecution, the foregoing amendments and following remarks. In the final Office Action, claims 1-21 were rejected. By this amendment, applicant has cancelled claims 1-21 and has added new claims 22-39, which are believed to be allowable over the cited references.

Drawings

Applicants acknowledge that the proposed drawing corrections filed in the previous response have been approved.

Claim Rejections Under 35 U.S.C. §112

Applicant acknowledges that the rejection of claims 1-21 under 35 U.S.C. §112, second paragraph, has been withdrawn.

Claim Rejections Under 35 U.S.C. §102

Claims 1-6, 9-17 and 20 were rejected under 35 U.S.C. §102 as being anticipated by Vavra et al. Based on the cancellation of claims 1-21, this rejection has been rendered moot and should be withdrawn.

Claim Rejections Under 35 U.S.C. §103

Claims 7, 8, 18 and 21 were rejected under 35 U.S.C. §103(a) as being anticipated by Vavra et al. Based on the cancellation of claims 1-21, this rejection has been rendered moot and should be withdrawn.

New Claims 22-39

By this amendment, applicants have added new claims 22-39, which are believed to be allowable over the cited references. New independent claim 22 recites a thermal mass flow controller comprising:

a thermal mass flow controller housing including a fluid input port and a fluid output port and a bypass channel disposed between the input and output ports;

a thermal mass flow sensor assembly operatively coupled to the thermal mass flow controller housing for measuring a flow of fluid through the bypass channel, the thermal mass flow sensor assembly including a sensor housing enclosing a mass flow sensor tube, a mounting portion coupled to the thermal mass flow controller housing and a thermal ground device coupled between the sensor housing and the mounting portion for providing a solitary thermal conductive path between the sensor housing and the mounting portion; and

a valve assembly mounted to the thermal mass flow controller housing for controlling the flow of fluid through the bypass channel.

Claim 23, dependent from claim 22, further requires a heat sink device thermally coupled to the valve assembly for conducting thermal energy from the valve assembly.

Applicants assert that the cited references, either alone or in combination, do not teach or suggest the invention recited in claim 22. Among other features recited in the claim, Vavra does not teach or suggest a thermal ground device coupled between the sensor housing and the mounting portion for providing a solitary thermal conductive path between the sensor housing and the mounting portion. While, in the Office Action, the examiner stated that Vavra discloses thermal grounded leads (70, 72, 74), applicants note that these leads are coupled between thermal shunt 66, which is directly coupled to the sensor tube, and the base plate 62 for the purpose of providing thermal grounds to the sensor tube. See col. 5, lines 30-38. These leads do not provide a solitary thermal conductive path between the sensor housing and the mounting portion, as recited in claim 20, but rather provide multiple grounds between the sensor tube and the base plate 62.

Furthermore, Vavra does not teach or suggest the limitations of claim 23, i.e., a heat sink thermally coupled to the valve assembly for conducting thermal energy from the valve assembly.

While, in the Office Action, the examiner stated that Vavra discloses a “conductive thermal element” (250, 254), applicant notes that these particular elements are insulation layers directly coupled to the mass flow sensor for the purpose of preventing outside temperature changes from affecting the sensor. See col. 6, lines 34-49. These elements are not conductive thermal elements or heat sinks.

Vu is cited to show "an enclosure/cover 26 that substantially envelops a fist and second chamber (Figs. 1,2) for the purpose of housing the apparatus." However, clearly Vu does not overcome the deficiencies of the Vavra reference.

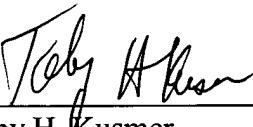
Accordingly, applicants assert that Vu, as well as any combination of Vavra and Vu, also do not teach or suggest the invention recited in new independent claim 13. Therefore, new independent claim 22 is allowable.

Claims 23-39 depend from new independent claim 22 and are allowable for at least the same reasons as independent claim 22.

Based on the foregoing amendments and arguments, applicants assert that the present application is allowable over the prior art of record. A notice to that effect is respectfully requested. If a telephone conference with applicants' attorney would expedite the prosecution of this application, the examiner is requested to telephone the undersigned at the number listed below.

In connection with the foregoing matter, please charge any additional fees which may be due, or credit any overpayment, to Deposit Account Number 50-1133. A duplicate copy of this letter is provided for this purpose.

Respectfully submitted,

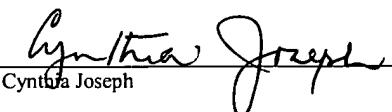


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I hereby certify that this correspondence is being deposited with the United States Post Office as First Class Mail on the date indicated below in an envelope addressed to Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

August 13, 2003
Date



Cynthia Joseph